

INCH-POUND

MS25469F
27 November 2003
SUPERSEDING
MS25469E
2 Jul 1993

DETAIL SPECIFICATION SHEET

RELAYS, ELECTROMAGNETIC, 5 AMPERES, 6 PDT,
TYPE I, MAGNETIC LATCH, STUD MOUNTED, SOLDER HOOK TERMINALS,
HERMETICALLY SEALED

INACTIVE FOR NEW DESIGN AFTER 14 FEBRUARY 2001.
NO SUPERSEDING SPECIFICATION.

This specification is approved for use by all Departments
and Agencies of the Department of Defense.

The requirements for acquiring the relay described herein shall
consist of this specification and the latest issue of MIL-PRF-6106.

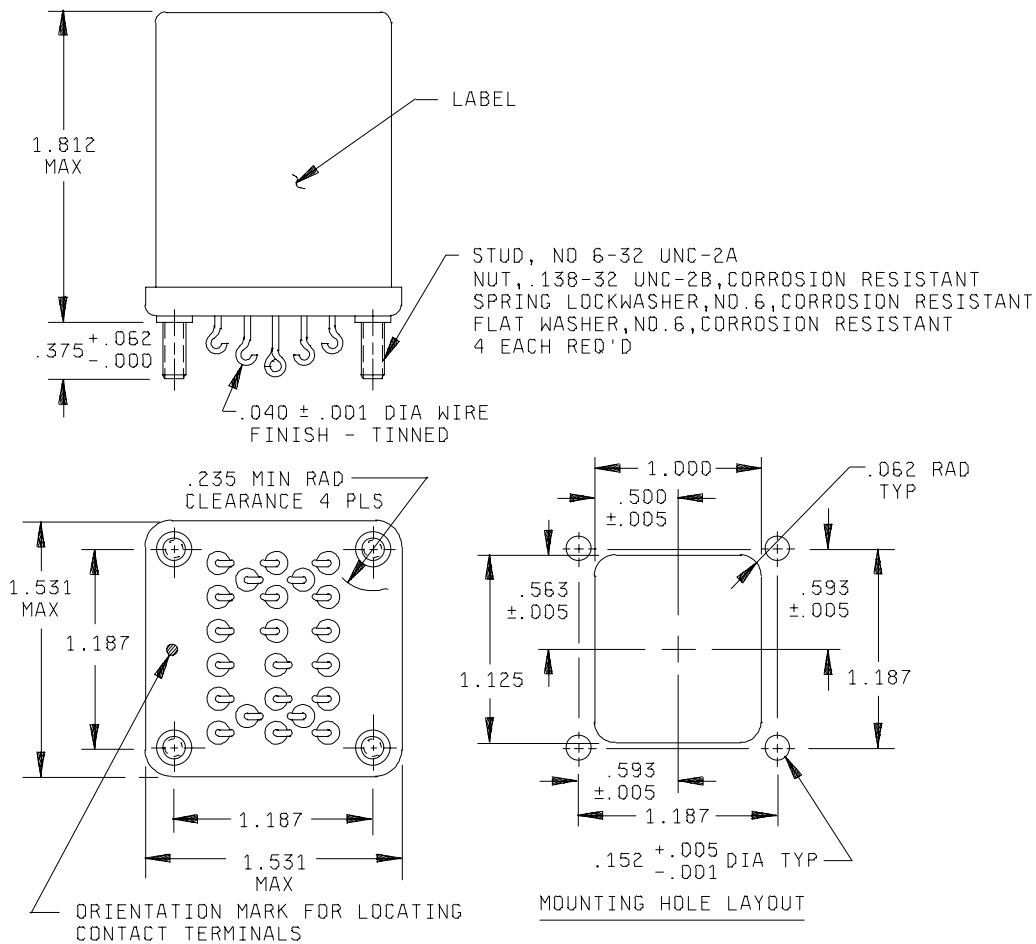
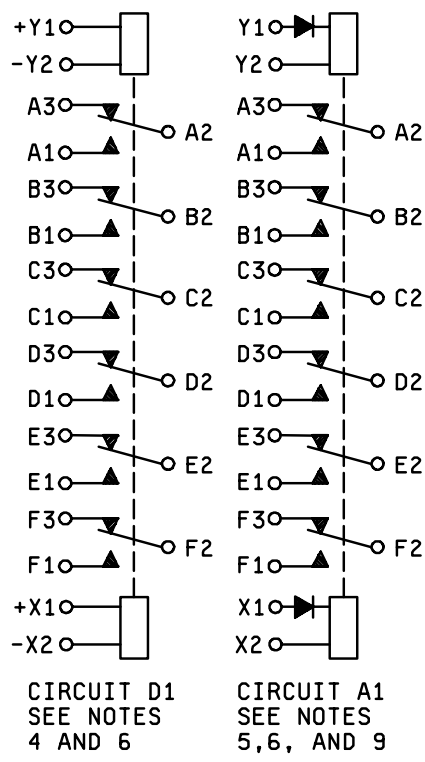


FIGURE 1. Design, dimensions, and circuit diagrams.



Inches	mm
.001	0.03
.005	0.13
.031	0.79
.040	1.02
.062	1.57
.138	3.51
.152	3.86
.235	5.95
.375	9.53
.812	20.62
1.125	28.58
1.187	30.15
1.531	38.89
1.812	46.02

- NOTES:
- 1/ Dimensions are in inches.
 - 2/ Metric equivalents are given for general information only.
 - 3/ Unless otherwise specified, tolerance is $\pm .010$ (0.25 mm).
 - 4/ Caution note to observe polarity must appear on relays with dc coils.
 - 5/ The use of diodes on ac relays is optional. Actual application must be shown on label.
 - 6/ Relay is magnetically latched in both positions.
 - 7/ Shock, vibration, and acceleration requirements application with coils de-energized
 - 8/ Terminal numbers shall not appear on relay header. There shall be affixed to the relay a legible circuit diagram that permanently and positively identifies each terminal location specified herein.

FIGURE 1. Design, dimensions, and circuit diagrams - Continued.

REQUIREMENTS:

Dimensions, configuration, and circuit diagrams: See figure 1.

Part or Identifying Number (PIN) and general characteristics: See table I.

Contact data:

Load ratings: See table II.

Maximum contact drop, initial: 0.150 V.

After life test: 0.175 V.

Overload current: 20 amperes.

Rupture current: 25 amperes.

Coil data: See table III.

Duty rating: Continuous.

RFI specification: MIL-STD-461 (applicable to coil circuits of ac operated relays).

Electrical data:

Minimum insulation resistance:

Initial: 100 megohms.

After life or environmental test: 50 megohms.

Dielectric strength (sea level).

	<u>Initial</u>	<u>After life tests</u>
Coil to case	1,000 V rms	1,000 V rms
Aux contacts	N/A	N/A
All other points	1,000 V rms	1,000 V rms

Dielectric strength (80,000 ft).

Coil to case	N/A	250 V rms
Aux contacts	N/A	
All other points	N/A	250 V rms

ENVIRONMENTAL CHARACTERISTICS:

Temperature range: -70°C to +125°C.

Maximum altitude rating: 80,000 feet.

Shock g level: 50 g's, duration: 6 ±ms.

Duration: 11 ms.

Maximum duration contact opening: 10 μs.

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Vibration, sinusoidal: .06 DA, 5 Hz to 60 Hz, 10 g's, 60 Hz to 1,500 Hz.

Acceleration: 15 g's.

PIN: MS25469- (plus applicable dash number from table I).

Group B and Group C inspections may be suspended at the discretion of the qualifying activity.

Qualification by similarity: See MIL-PRF-6106.

TABLE I. Dash numbers and characteristics. ^{1/}

Dash number MS25469-	Type	Coil	Terminal type	Mounting or mating socket	Auxiliary contacts	Max weight in pounds
D1	I	dc	Solder hook	Stud	None	0.37
A1 ^{2/}	I	ac	Solder hook	Stud	None	0.38

^{1/} MS25469-AD1 is cancelled without replacement.

^{2/} MS25469-A1 is inactive for new design without replacement 30 Sep 1987.

TABLE II. Rated contact load (amperes per pole) (case grounded).

Type of load	Life operat ing cycles x 10 ³	28 V dc				115 V ac, 1 phase				115/200 V ac, 3 phase 1/				See appro priate notes
		Main		Aux		Main		Aux		Main		Aux		
		NO	NC	NO	NC	400 Hz	60 Hz	400 Hz	60 Hz	400 Hz	60 Hz	400 Hz	60 Hz	
Resistive	100	5	5			5	4							
Inductive	100													
Inductive	20	3	3			3	2							
Motor	100	1.5	1.5			1.5	1							
Lamp	100	0.8	0.8			0.8	0.6							
Transfer load														2/
Mechanical life reduced current	400	1.25	1.25			1.25	1							
Mixed loads	Applicable in accordance with MIL-PRF-6106													

^{1/} Absence of value indicates relay is not rated for 3-phase application.

^{2/} Transfer load indicates relay is suitable for transfer between unsynchronized ac power supplies at rating indicated

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TABLE II. Operating characteristics.

PIN MS25469-	Coil data									Time - milliseconds maximum					
	Coil	Nominal			Max		Max pick-up voltage			Operate 3/	Release 4/	Contact Bounce			
		Volts 1/	Freq Hz	Ω Res	Volt s	Amp	Nor- mal 2/	High temp test	Cont cur- rent test			Main		Aux	
												NO	NC	NO	NC
D1	X1, X2 Y1, Y2	28	dc	N/A	29	0.17	18	18	19.8	25	N/A	2	2	N/A	N/A
A1	X1, X2 Y1, Y2	115	400 5/	N/A	122	0.07	90	90	90	25	N/A	2	2	N/A	N/A

1/ CAUTION: Use of any coil voltage less than rated coil voltage will compromise the operation of the relay.

2/ Over the temperature range.

3/ With rated coil voltage.

4/ From rated coil voltage.

5/ MS25469-A1 may be used on 60 Hz if maximum ambient temperature is limited to +85°C. Maximum coil current shall be 0.077 ampere).

6/ MS25469-A1 is inactive for new design without replacement effective 30 September 1987.

NOTES

Referenced documents. In addition to MIL-PRF-6106, this specification sheet references the following documents. (Government documents are available on line at <http://assist.daps.dla.mil/quicksearch> or www.dodssp.daps.mil or from the Standardization Document Order Desk, 700 Robbins Avenue, Building 4D, Philadelphia, PA 19111-5094).

STANDARDS

Department of Defense

MIL-STD-461 - Requirements for the Control of Electromagnetic Interference Characteristics of Subsystems and Equipment

Custodians:

Navy - AS
Air Force - 11
DLA - CC

Preparing activity:

DLA - CC

(Project 5945-1214-16)

Review activities:

Navy - EC

NOTE: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using ASSIST Online database at www.dodssp.daps.mil.